

No. 722,985.

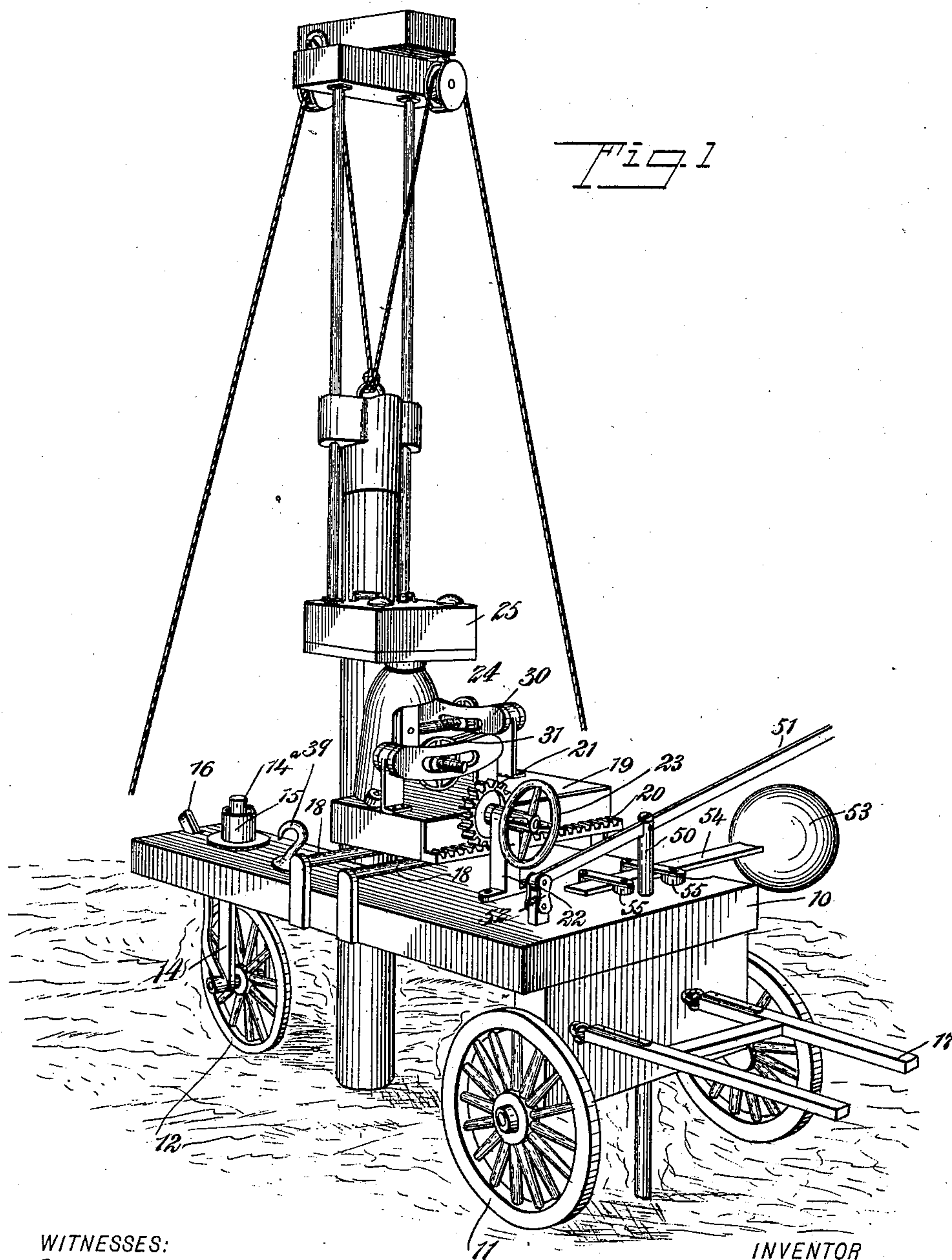
PATENTED MAR. 17, 1903.

J. H. INGGOLDSBY.
DRIVING APPARATUS.

APPLICATION FILED MAY 19, 1902.

NO MODEL.

4 SHEETS—SHEET 1.



WITNESSES:

J. V. Boopley

Isaac B. Owens

INVENTOR

James H. Inggoldsby

BY

Mumford

ATTORNEYS.

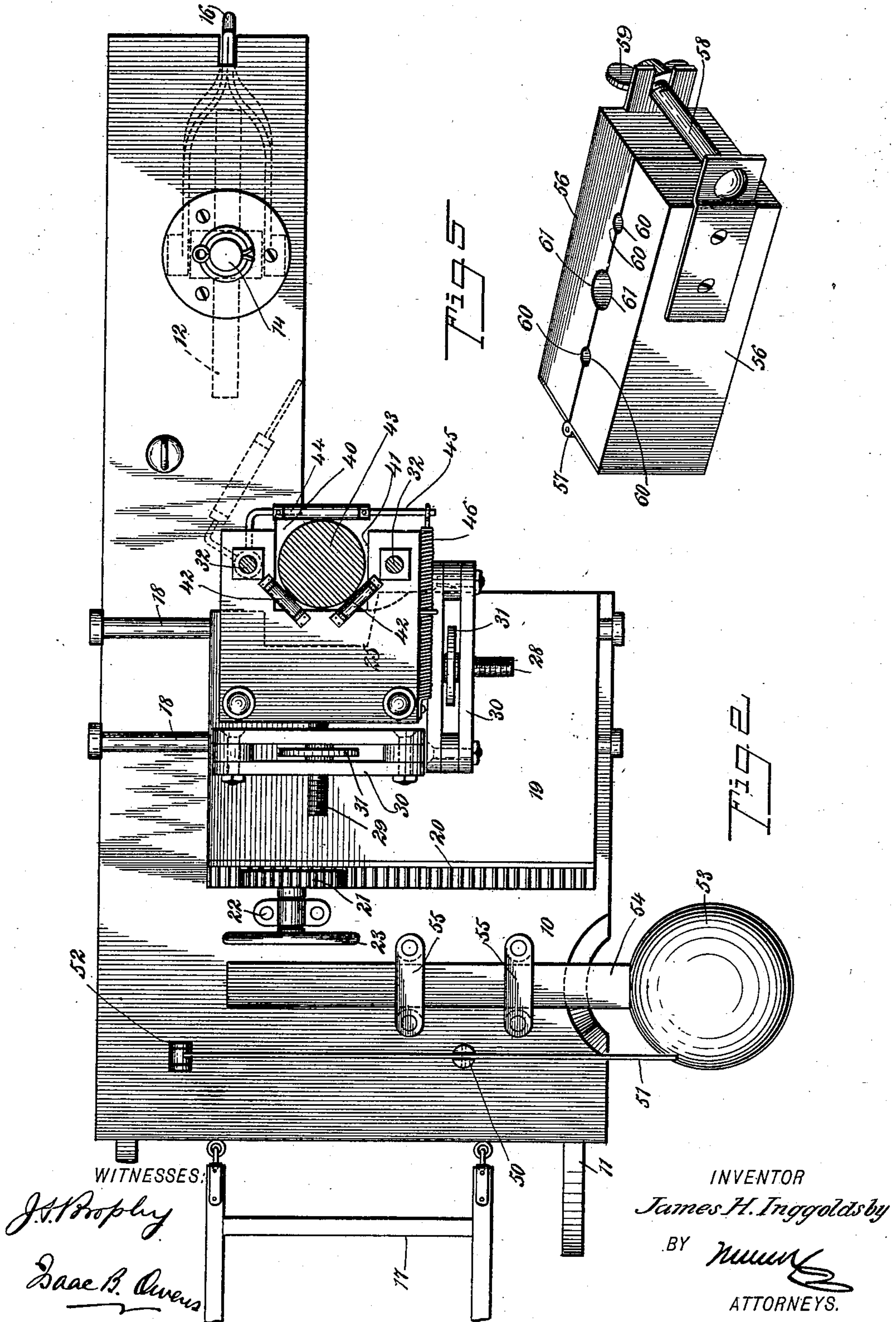
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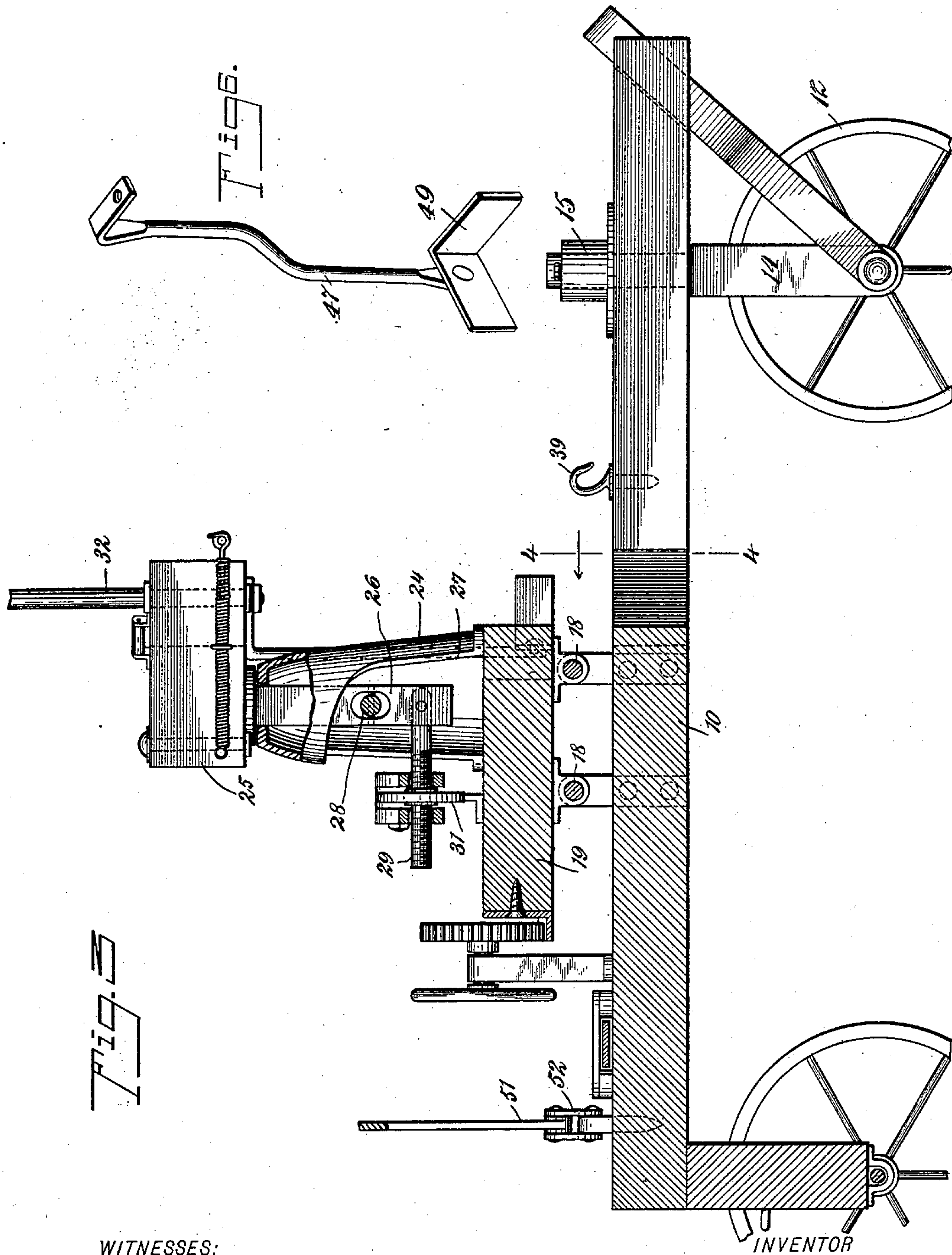
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J. V. Proply

Isaac B. Owens.

INVENTOR

James H. Inggoldsby

BY

Wm. H. Inggoldsby
ATTORNEYS.

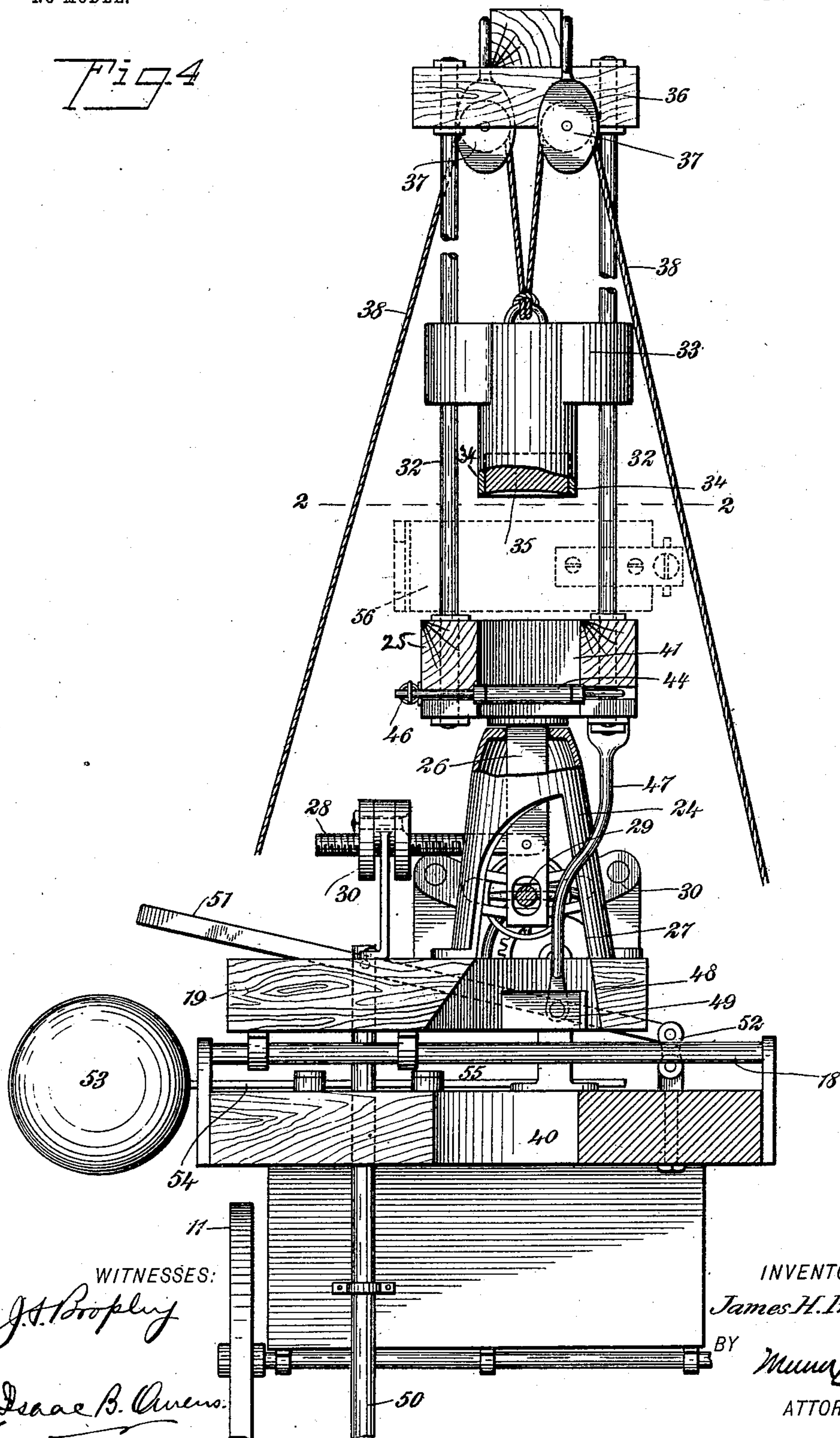
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4 SHEETS—SHEET 4.



UNITED STATES PATENT OFFICE.

JAMES H. INGGOLDSBY, OF COUNCIL BLUFFS, IOWA.

DRIVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 722,985, dated March 17, 1903.

Application filed May 19, 1902. Serial No. 107,974. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. INGGOLDSBY, a citizen of the United States, and a resident of Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented a new and Improved Driving Apparatus, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide an apparatus which may be used for driving posts, piles, well-tubing, and the like. The apparatus is mounted on a wheeled body, so that it may be readily removed from place to place, and is especially adapted for farm and ranch use in driving fence-posts and the like and also for railway companies in fencing in their lines.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the invention, showing it in the operation of driving a pile or post. Fig. 2 is a sectional plan view looking down upon the line 2 2 of Fig. 4. Fig. 3 is a longitudinal section. Fig. 4 is an elevation with parts in section on the line 4 4 of Fig. 3. Fig. 5 is a detail view of the guide-block for well-tubes, and Fig. 6 is a detached perspective of an element to be hereinafter described.

10 indicates the body of the apparatus, and this is mounted on front wheels 11 and a single rear steering-wheel 12, the latter being carried in a fork 14, the stem 14^a of which is mounted to turn in a box 15 on the body 10.

16 indicates an arm connected with the axle of the wheel 12 to permit turning the same to steer the apparatus when in motion.

17 indicates a draft appliance of any suitable form for hitching a team to the apparatus.

Mounted transversely on top of the body 10 are two guides 18, and on these guides is arranged a carriage 19, having a transverse rack 20, with which meshes a pinion 21, the shaft of which is carried in a pedestal-bearing 22 on the body 10, and 23 indicates a hand-wheel

connected to this shaft whereby to throw the carriage 19 laterally from the position shown in Figs. 1 and 5 to a position directly over the right-hand-side edge of the body 10.

On the carriage 19 is mounted a hollow stand 24, and sustained on this stand is a block 25, which has a stem 26 attached thereto and projecting downward loosely into the stand 24. This stem 26 is angular in cross-sectional form, and the opening in the top of the stand 24 is correspondingly shaped; but the arrangement is such as to allow a wobbling movement of the stem 26 on the stand, for a purpose which will be hereinafter fully set forth. The stand is provided with an enlarged opening 27 in its side, and through this opening project screws 28 and 29. These screws are pivotally connected to the stem 26 and are disposed at right angles to each other.

30 indicates arc-shaped guides, in which the screws 29 and 28 are respectively fitted, so as to be movable transversely in the guides, and 31 indicates wheel-nuts, which work on the screws 28 and 29 and are held in the guides 30. By means of these nuts the screws 28 and 29 may be operated to swing the stem 26 in the stand 24, and thus to adjust the block 25, causing this block to lie always horizontal, notwithstanding that the ground on which the apparatus rests may be more or less uneven. The block 25 carries two vertical guides 32, between which the driving-weight 33 is mounted, so as to be moved vertically. This weight has a cavity 34 formed therein, and in this cavity is placed a block of wood or other relatively yielding material 35, this block being concave on its lower face and serving to prevent marring or breaking the posts or tubes when driving the same. At the top of the guides 32 is arranged a head 36, and on this head are carried two blocks 37. Ropes 38 are connected to the weight 33 and are passed, respectively, to the blocks 37 and are led to opposite sides of the apparatus.

39 indicates a hook fastened to the body 10 and serving to have one of the ropes 38 connected therewith, so that the weight 33 may be held at any desired elevation. These two ropes 38 enable two men or two groups of

men to work on the apparatus, hoisting the weight by hand and allowing it to drop by gravity on the pile.

Reference to Fig. 2 will show that the body 10 of the apparatus has a rearward extension located at its right-hand side, this extension carrying the fork 14 of the wheel 12 and serving also to form a corner or inclosure, (indicated at 40,) which receives the pile or post as it is being driven. The block 25 is formed with a cavity 41 therein, and on the block are arranged two antifriction-rollers 42, which are adapted to be engaged by the pile. The pile is indicated at 43 in the drawings. The cavity 41 receives the pile and the rollers 42 guide the same.

44 indicates a third guide-roller, this roller being carried on a swinging arm 45, and 46 indicates a spring for removably holding the parts 44 and 45 in operative position. The arm 45 is also capable of being thrown out laterally, as indicated by the dotted lines in Fig. 2, so as to permit the pile to be entered into or moved out of the cavity or recess 41. As illustrated best in Figs. 4 and 6, the block 25 carries a downwardly-projecting arm 47, and this arm extends into a recess 48 in the carriage 19 and carries at this point an angular guide-plate 49, this guide-plate serving to be engaged by the pile and to guide the same as it moves downward under the action of the weight. The recesses 41 and 48 are arranged one above the other in vertical line, as Fig. 4 illustrates.

50 indicates a vertically-disposed anchor-rod which is movable longitudinally on the body of the apparatus and adapted to be driven down into the ground to hold the apparatus stationary when the driver is working. This anchor-rod is connected with a lever 51, mounted on top of the body 10 through the medium of a link 52, and by bearing down on this lever the anchor-rod may be moved into position. The anchor-rod may be released by raising the lever 51. In order to balance the apparatus under certain conditions, which will be hereinafter pointed out, a weight 53 is provided, this weight being carried on a horizontally-disposed beam 54, in turn mounted to slide in keepers 55, fastened to the top of the body 10 of the apparatus. The weight may be moved out to the position shown in Fig. 1, or it may be moved inward to or beyond the position shown in Fig. 2.

Fig. 5 illustrates a guide which is especially intended for use in driving well-tubes. This guide comprises two blocks 56, hingedly connected together, as indicated at 57, and provided with a threaded bar 58 and nut 59 for holding them securely engaged, as shown in the drawings. The sections or blocks 56 are formed with matching orifices 60 and 61, of which former there are two in each block and of which latter there is one in each block. When the blocks 56 are engaged together, as Fig. 5 illustrates, these orifices match to form

three vertically-disposed openings in the guide.

In using the invention for driving piles, fence-posts, and the like under ordinary circumstances the carriage is adjusted to the position shown in Figs. 2, 3, and 4, and the pile is placed in the cavities 40, 48, and 41, as illustrated in Figs. 1 and 2. The bar 45 is locked in position, and the anchor 50 is moved downward. Two or more men now grasp the ropes 38 and by drawing down thereon the weight 33 may be moved up, after which it is allowed to fall on the pile or post, driving it in the usual manner. In driving a well-tubing the parts are operated in the same manner, except that the guide shown in Fig. 5 is employed. This guide is located just above the blocks 25, as shown by dotted lines in Fig. 4, and the guide-bars 32 are fastened in the orifices 60. The well-tube (not shown) is passed loosely through the matching orifices 61, and the operation of driving is performed in the manner explained.

In repairing fences or in other work where it is not convenient to move the machine up to the pile in the manner shown in Figs. 1 and 2 the carriage 19 should be moved to the right-hand side of the body 10 as far as the track-bars 18 will allow. The arrangement is such that the recessed portion 41 of the block 25, and 48 of the carriage 19 will overhang the right-hand edge of the body 10, and the pile, post, well-tube, or other part to be driven may then be placed vertically along the right-hand-side edge of the body. In this case in order to balance the apparatus and prevent it from capsizing the weight 53 may be drawn out beyond the left-hand side of the body. Under other conditions, however, the weight should be moved in or nearly in, as shown in Fig. 2.

Various changes in the form and details of my invention may be resorted to at will without departing from the spirit thereof. Hence I consider myself entitled to all forms of the invention as may lie within the intent of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a driving apparatus, the combination of a body, a transversely-disposed track mounted on the body, a carriage mounted on said track, to move thereon transversely of the body, and driving devices proper mounted on the carriage.

2. In a driving apparatus, the combination of a body, a transverse track mounted thereon, a carriage mounted on the track to move thereon transversely of the body, a rack fastened to the carriage, a revoluble gear mounted on the body and meshed with the rack on the carriage, and driving mechanism proper mounted on the carriage.

3. In a driving apparatus, the combination of a body, a carriage mounted thereon, driv-

ing mechanism proper mounted on the carriage, and an adjustable weight carried on the body to balance the carriage and the parts sustained thereby.

5 4. In a driving apparatus, the combination of a body, a carriage transversely adjustable thereon, driving mechanism proper mounted on the carriage, and a weight carried by the body and movable transversely in and out
10 with respect thereto, for the purpose specified.

5. In a driving apparatus, the combination of a carriage having a recessed portion, a driving mechanism sustained by the carriage,
15 an arm having connection with the driving mechanism and extending downward into the recess of the carriage, and a guide held by the arm.

6. The combination of a stand or support,
20 a block mounted above the same, a shank or stem attached thereto and projected downward into the stand, means for moving said stem or shank sidewise to adjust the block, and driving devices proper carried on the block.

25 7. The combination of a stand or support, a block mounted above the same, a shank or stem attached thereto and projected downward into the stand, means for moving said stem or shank sidewise to adjust the block,
30 driving devices proper carried on the block, the said means for adjusting the stem or shank comprising screws connected therewith and extending at angles to each other, guides in which said screws are mounted to
35 move transversely, and nuts working with the screws against the guides.

8. A driving apparatus having a stand or support, driving mechanism proper mounted thereon, and means for adjusting said driving mechanism on the support to maintain
40 the driving mechanism perpendicular, said

adjusting means comprising two screws extending at angles to each other, guides in which the screws are transversely movable and nuts working between the guides and
45 screws.

9. A driving apparatus, comprising a support, driving mechanism proper mounted thereon, a stem or shank projecting downward into the support and fastened to the
50 driving mechanism, and means working with said stem or shank to adjust the driving mechanism laterally.

10. A driving apparatus comprising a support, driving mechanism proper mounted
55 thereon, a stem or shank projecting downward into the support and fastened to the driving mechanism, and means working with said stem or shank to adjust the driving mechanism laterally, said means for adjusting the driving
60 mechanism comprising two screws connected with the stem or shank and extending at angles to each other, guides in which the screws are transversely movable, and nuts working with the screws and bearing against the
65 guides.

11. A driving apparatus, comprising a body having one portion cut away to produce a centrally-disposed recess therein, a driving mechanism proper mounted over said recess, said
70 driving mechanism proper including a recessed carriage, and guide devices for holding the member to be driven in the recess of the carriage, said guide devices comprising a swinging arm having a guide-roller thereon.
75

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES H. INGGOLDSBY.

Witnesses:

CHAS. F. PASCHEL,
JOHN S. MURPHY.